

WTIO30 FMEE 240635

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 19/5/20222023

1.A MODERATE TROPICAL STORM 5 (CHENESO)

2.A POSITION 2023/01/24 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 20.0 S / 42.5 E
(TWENTY DECIMAL ZERO DEGREES SOUTH AND
FORTY TWO DECIMAL FIVE DEGREES EAST)

MOVEMENT: NORTH-WEST 3 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 0.5/6 H

4.A CENTRAL PRESSURE: 997 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

6.A EXTENSION OF WIND BY QUADRANTS (KM):

28 KT NE: 185 SE: 140 SW: 110 NW: 130

34 KT NE: 95 SE: 0 SW: 0 NW: 0

48 KT NE: 0 SE: 0 SW: 0 NW: 0

64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1007 HPA / 1600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/01/24 18 UTC: 19.9 S / 42.4 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 185 SE: 140 SW: 155 NW: 140

34 KT NE: 100 SE: 0 SW: 0 NW: 95

24H: 2023/01/25 06 UTC: 19.9 S / 42.3 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 230 SE: 230 SW: 165 NW: 175

34 KT NE: 130 SE: 100 SW: 75 NW: 95

36H: 2023/01/25 18 UTC: 20.0 S / 42.2 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 295 SE: 250 SW: 425 NW: 185

34 KT NE: 120 SE: 75 SW: 110 NW: 110

48 KT NE: 55 SE: 55 SW: 55 NW: 45

48H: 2023/01/26 06 UTC: 20.2 S / 42.0 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 230 SE: 360 SW: 415 NW: 185

34 KT NE: 130 SE: 215 SW: 205 NW: 100

48 KT NE: 55 SE: 45 SW: 55 NW: 55

60H: 2023/01/26 18 UTC: 20.5 S / 41.6 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 250 SE: 335 SW: 445 NW: 205

34 KT NE: 140 SE: 195 SW: 195 NW: 140

48 KT NE: 75 SE: 75 SW: 75 NW: 65

72H: 2023/01/27 06 UTC: 21.3 S / 40.9 E, VENT MAX= 070 KT, TROPICAL CYCLONE

28 KT NE: 285 SE: 405 SW: 415 NW: 280

34 KT NE: 165 SE: 250 SW: 220 NW: 175

48 KT NE: 75 SE: 75 SW: 85 NW: 75

64 KT NE: 65 SE: 55 SW: 55 NW: 55

2.B LONGER-RANGE OUTLOOK:

96H: 2023/01/28 06 UTC: 23.3 S / 39.8 E, VENT MAX= 095 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 350 SE: 360 SW: 325 NW: 260

34 KT NE: 205 SE: 215 SW: 195 NW: 185

48 KT NE: 95 SE: 100 SW: 95 NW: 85

64 KT NE: 75 SE: 75 SW: 65 NW: 65

120H: 2023/01/29 06 UTC: 25.7 S / 40.2 E, VENT MAX= 085 KT, TROPICAL CYCLONE

28 KT NE: 360 SE: 325 SW: 270 NW: 260

34 KT NE: 195 SE: 205 SW: 185 NW: 175

48 KT NE: 100 SE: 90 SW: 90 NW: 80

64 KT NE: 80 SE: 60 SW: 60 NW: 60

2.C ADDITIONAL INFORMATION:

T=CI=2.5+

DURING THE LAST 6 HOURS, THE CONVECTION HAS STRENGTHENED AND CONTINUED TO ORGANIZE AROUND THE CENTER OF CHENESO. IT HAS WRAPPED MORE AROUND THE CENTER AND HAS STARTED TO LOOK LIKE A CURVED BAND IN THE NORTHEAST QUADRANT. THE 0337Z SSMIS MICROWAVE IMAGE HAS POSITIONED THE CENTER AT ABOUT 170 KM FROM THE MALAGASY COAST. IT ALSO SHOWS A CLEARER STRUCTURE AROUND THE CENTER. THE CMRS HAS THUS REVISED THE INTENSITY UPWARDS WITH ESTIMATED WINDS OF 35KT, IN ACCORDANCE WITH THE SMAP DATA OF 0250Z.

CHENESO SHOULD BE DRIVEN BY A LOW TO MID TROPOSPHERIC EAST TO SOUTHEASTERLY FLOW GENERATED BY A SUBTROPICAL RIDGE LOCATED SOUTH AND SOUTHWEST OF THE SYSTEM. HOWEVER, THE ACTION OF THIS RIDGE WILL BE COUNTERACTED BY THE PRESENCE OF A NEAR EQUATORIAL RIDGE TO THE NORTH, WHICH WILL PRODUCE A CONTRADICTIONARY WEST TO NORTHWEST FLOW. AS A RESULT, DURING THE NEXT THREE DAYS, THE SYSTEM SHOULD MOVE SLOWLY IN A GENERAL NORTHWESTERLY DIRECTION. AN ERRATIC TRACK, WITH POSSIBLE MOMENTS OF QUASI-STATIONARITY, ARE POSSIBLE DURING THIS PERIOD. IN THE SECOND PART OF THE WEEK, A BENDING OF THE TRAJECTORY TOWARDS THE SOUTH-WEST AND THEN THE SOUTH IS PROPOSED BY A LARGE MAJORITY OF THE ENSEMBLISTIC AND DETERMINIST MODELS BUT THE TIMING AND THE DEGREE OF BENDING IS STILL VERY UNCERTAIN AT THIS STAGE. THE GFS MODEL LACKS STABILITY BETWEEN ITS LAST RUNS WITH A SCENARIO

CLOSER TO THE MALAGASY COASTS AND A SCENARIO MORE ON THE CENTER OF THE CHANNEL. IFS NOW SEEMS TO PROPOSE A MORE STABLE SCENARIO ON THE CENTER OF THE CHANNEL. THE ENSEMBLE MODELS ARE STILL PROPOSING A WIDE RANGE OF TRAJECTORIES EXTENDING FROM THE MALAGASY COAST TO THE CENTER OF THE CHANNEL AT THE 72 HOUR DEAL. THE PRESENT FORECAST IS THEREFORE MAINLY BASED ON THE IFS TREND, AND THE LATEST GFS NETWORK. HOWEVER, THERE IS STILL SOME UNCERTAINTY ON THE TRAJECTORY.

THE SYSTEM SHOULD BE IN A GLOBALLY FAVORABLE ENVIRONMENT FROM THE ATMOSPHERIC AND OCEANIC POINT OF VIEW, EXCEPT FOR THE VERY END OF THE TIME FRAME WHERE THE TROPOSPHERE MEAN SHEAR COULD BE INCREASING. A GRADUAL INTENSIFICATION IS EXPECTED UNTIL FRIDAY AT A CLIMATOLOGICAL PACE.

IMPACTS ON INHABITED LANDS DURING THE NEXT 72 HOURS.

MADAGASCAR:

- IN ADDITION TO THE HEAVY RAINS THAT HAVE ALREADY FALLEN, THE RAINS WILL CONTINUE OVER THE NORTHWESTERLY AND CENTRAL WESTERN REGIONS WITH RAINFALL EXCEEDING 150 MM OVER THE PERIOD. THE CENTRAL WEST REGION WILL BE MORE CONCERNED FROM WEDNESDAY WITH ACCUMULATIONS OVER THE PERIOD THAT MAY REACH 300 TO 400 MM LOCALLY.

- AN EPISODE OF STRONG WINDS (IN THE RANGE OF GALE FORCE WINDS) IS POSSIBLE ON PARTS OF THE COAST BETWEEN MAINTIRANO AND CAPE SAINT-VINCENT FROM THIS EVENING AND FOR THE DAY OF WEDNESDAY.

- DANGEROUS SEAS (WAVES HIGHER THAN 4M) COULD AFFECT THE AREAS BETWEEN MAINTIRANO AND CAPE SAINT-VINCENT FROM WEDNESDAY, EXTENDING TO CAPE SAINT-ANDRE IN THE NORTH ON THURSDAY.